

Battery Energy Storage Systems in LA County

Renewable Energy Ordinance Update


June 17, 2025




Simultaneous Translation Available

Simultaneous language translation is not available if you use dial-in or call-in phone audio features.

Windows/ MacOS Users

1. Go to the bottom control buttons, click **Interpretation** 
2. Click on the language that you would like to hear.
3. (Optional) To hear the interpreted language only, click Mute Original Audio

Android/iOS Users

1. In your meeting controls, tap ellipses 
2. Tap Language Interpretation
3. Tap the language you want to hear
4. (Optional) Tap the toggle to Mute Original Audio
5. Click Done

Click on the Interpretation Icon



The screenshot shows a Zoom meeting interface. The main slide has a teal background with the 'LA COUNTY PLANNING' logo in the top left. The title 'Countywide Residential Design Standards' is in large yellow font, with the date 'November 17, 2022' below it. A video thumbnail of a person is visible. An orange box with the word 'Español' and an arrow points to the 'ES Spanish' option in the 'Listen In' menu. The 'Listen In' menu is open, showing 'Original Audio (Interpretation off)' as selected, with options for English (EN), Japanese (あ), and Spanish (ES). Below this is a 'Mute Original Audio' option. At the bottom of the Zoom window, there are icons for 'Audio Settings', 'Chat', 'Raise Hand', and 'Interpretation' (represented by a globe icon).

LA COUNTY
PLANNING

Countywide Residential Design Standards

November 17, 2022

Español

Listen In:

- ✓ Original Audio (Interpretation off)
- EN English
- あ Japanese
- ES Spanish

Mute Original Audio

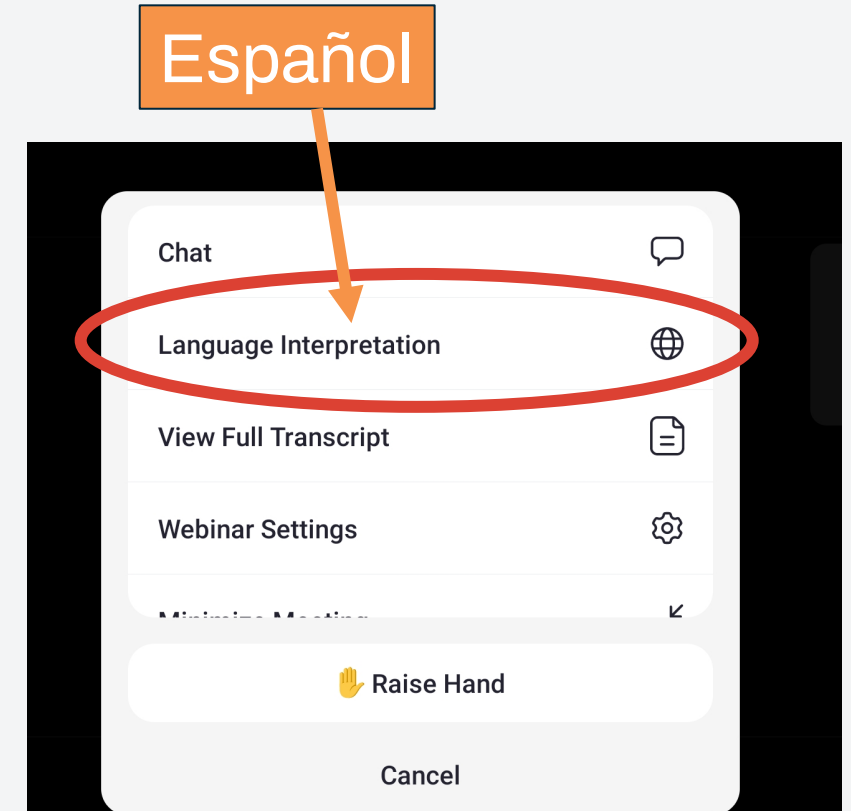
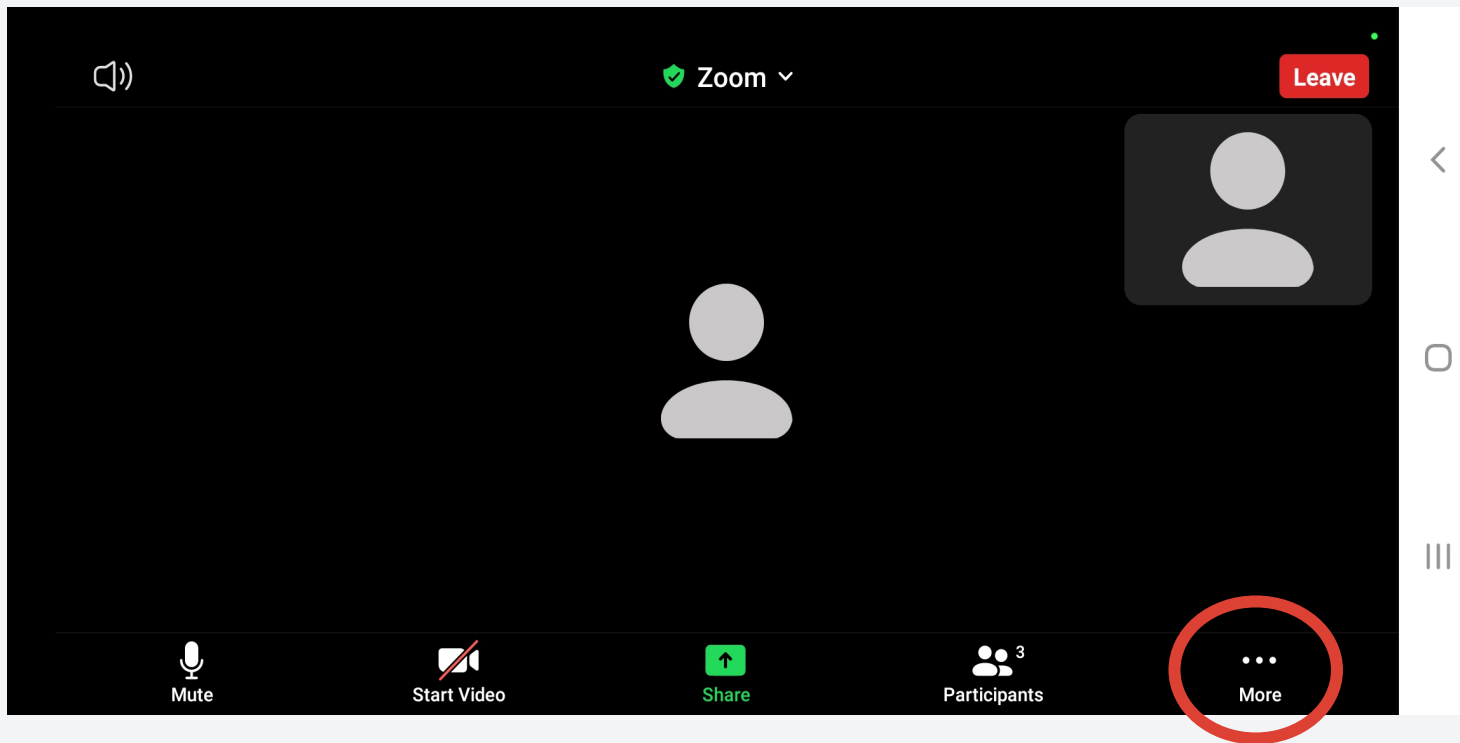
Audio Settings ^

Chat ^ Raise Hand Interpretation

LA COUNTY
PLANNING

SHAPING TOMORROW

Tap on More button or ellipsis ...



Welcome / Introductions

County Project Team

- Mark Herwick, Supervising Regional Planner
 - Katie Lample, Regional Planner
 - Lorraine Acuña, Regional Planner
 - Caroline Chen, Senior Regional Planner
-
- Mostafa Kashe – Chief Electrical Engineer & Inspector (LA County Public Works)
 - Joshua Costello – Fire Fighter Specialist, Codes and Ordinances Unit, Fire Prevention Division (LA County Fire Department)

Agenda

- Project Overview
- What is Battery Energy Storage?
- Project Permitting Process
 - Planning
 - Building and Safety
 - Fire
- Existing BESS Projects
- Considerations for REO Update (allow time to discuss each topic below)
 - Siting/Location
 - Safety
 - Other considerations
- Discussion / Final Questions

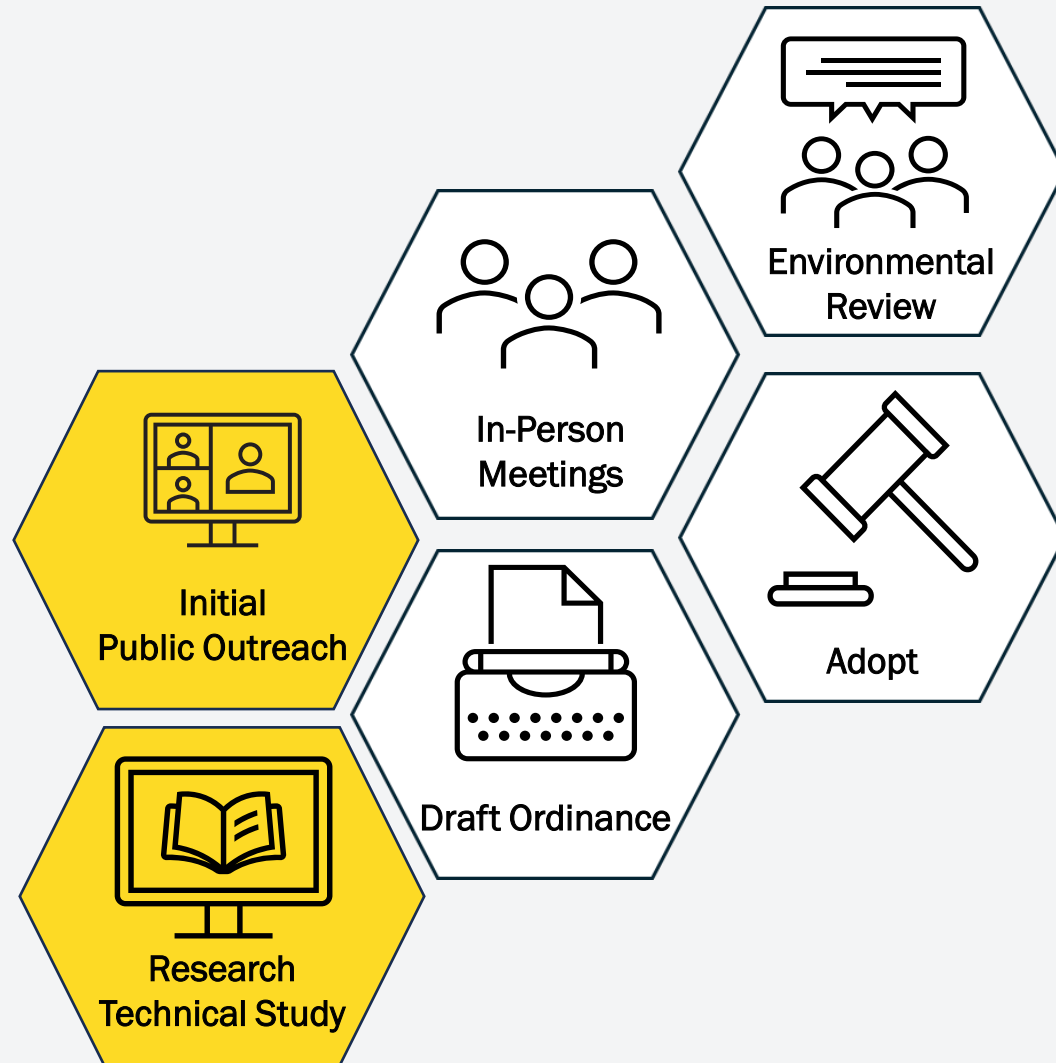
PROJECT OVERVIEW

BOARD DIRECTION-

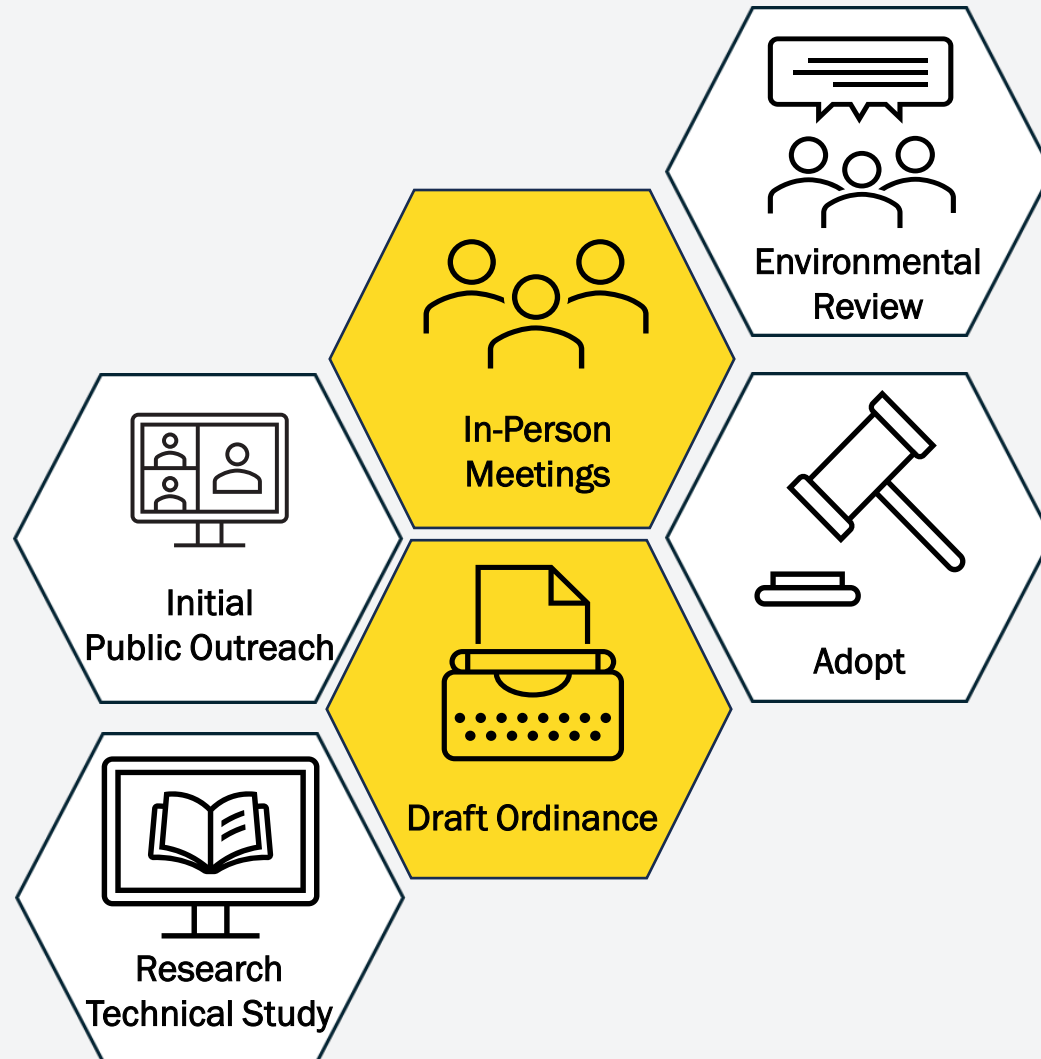
Developing a LA County Ordinance for Renewable Energy Zoning, Standards, and Requirements

- Conduct outreach related to BESS
- Amend Title 22 to regulate BESS
 - Establish a size threshold for ministerial/discretionary project approvals
 - Identify siting criteria
 - Differentiate primary use projects and accessory use projects
 - Consider:
 - Overconcentration of large primary use BESS
 - Hazards, such as Very High Fire Hazard Severity Zones
 - Noise impacts
 - Decommissioning protocols
 - Emerging technologies

PROCESS



PROCESS



PROCESS



WHAT IS BATTERY ENERGY STORAGE?

Battery Energy Storage System (BESS)



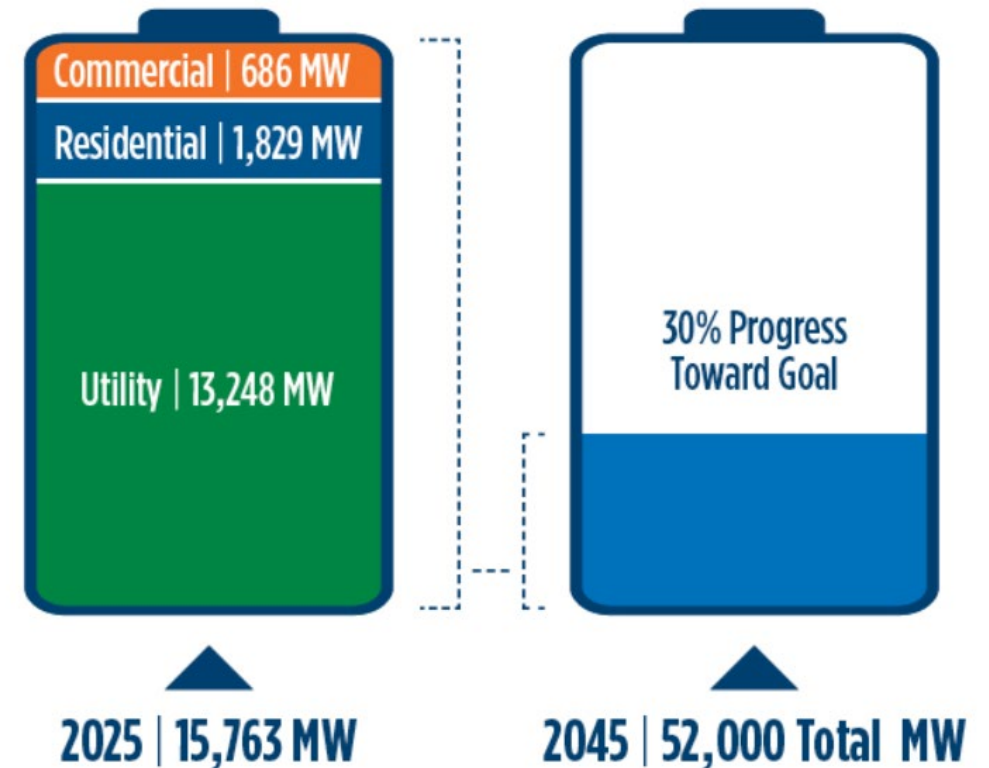
- Electrochemical devices that charge, or collect, energy from the grid or a generation facility
- Store and discharge energy at a later time
- Helpful for utilizing renewable energy and increasing grid flexibility

Why BESS?

- **SB 100** – 100% Clean Energy Act of 2018
 - **100% retail electricity to be supplied by renewable and zero carbon sources by 2045.**
 - Renewable energy portfolio standard requirement 60% by 2030.
- California is projected to need 79 GW of new renewable generation **and around 50 GW of battery storage** to meet its 2045 greenhouse gas reduction goals (CAISO 20 year transmission outlook).

Energy Storage in California by Type

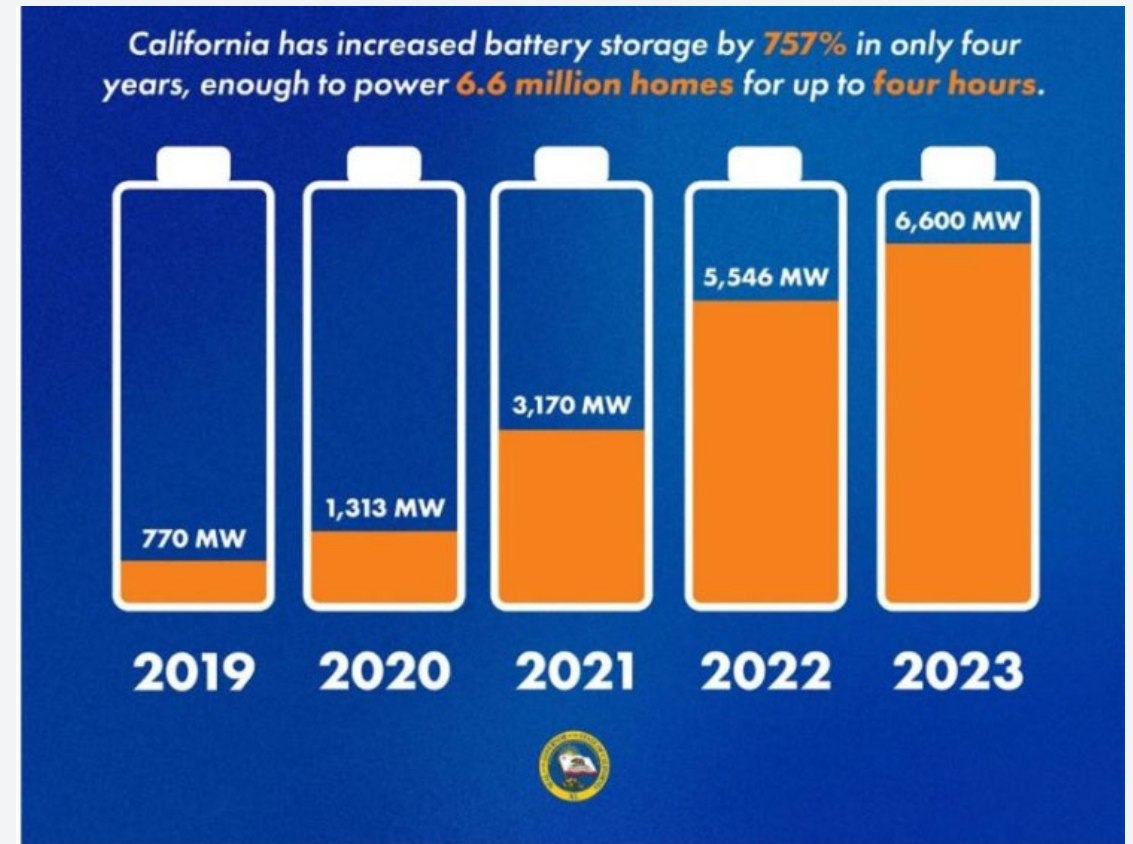
** As of April 2025*



Source: California Energy Commission

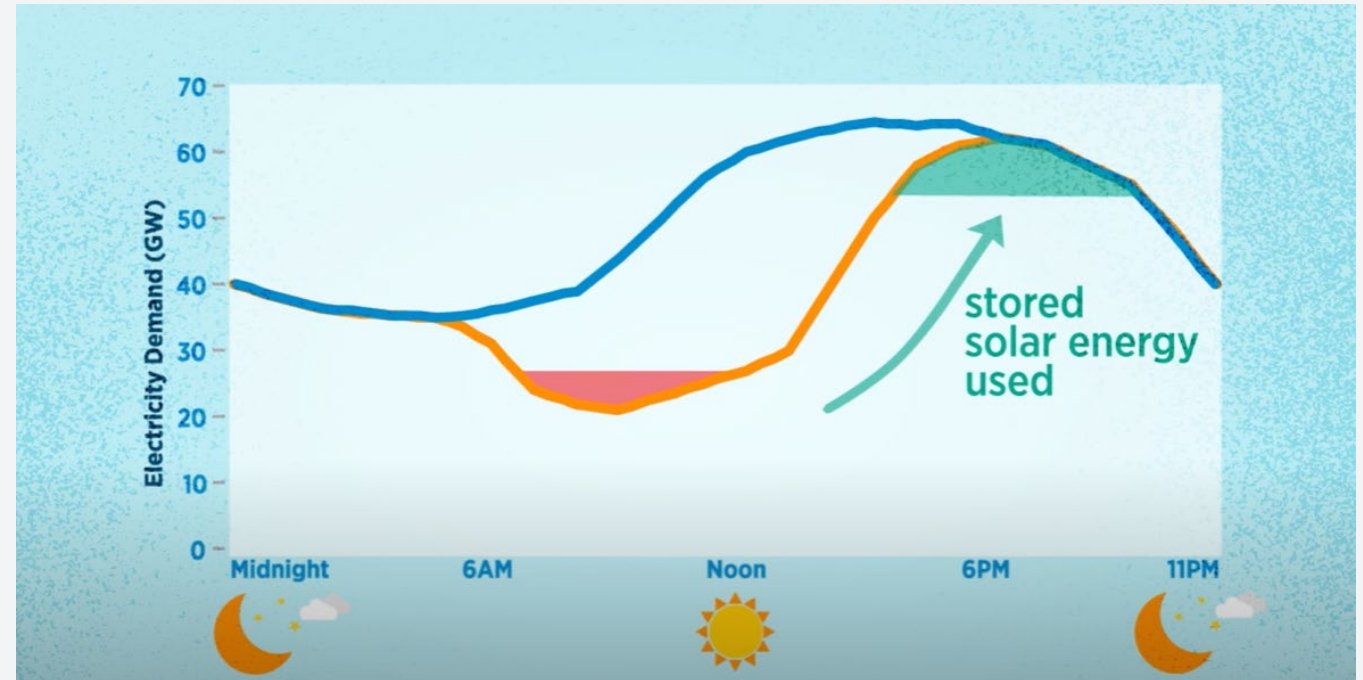
Why BESS?

- Increase in renewable energy generation
- Federal and state incentives and goals
- Technology maturity and market-readiness



Why BESS?

- Increase in renewable energy generation
- Federal and state incentives and goals
- Technology maturity and market-readiness



Source: Department of Energy

Types of Batteries

- **Duration**
 - Short vs. Long
- **Battery Composition**
 - Lithium Ion
 - Lithium Iron Phosphate
 - Lithium Nickel Manganese Cobalt Oxide
 - Lead-acid
 - Flow Batteries (various chemistries)
 - Sodium-Ion
 - And more



Source: SDG&E / Ted Walton via Energy Storage News

BESS REGULATIONS AND PERMITTING

PERMITTING - State Opt-in

Assembly Bill 205

- Gives the California Energy Commission the authority to subsume local planning department authority to issue land use entitlements for specific renewable energy projects.

State Regulations

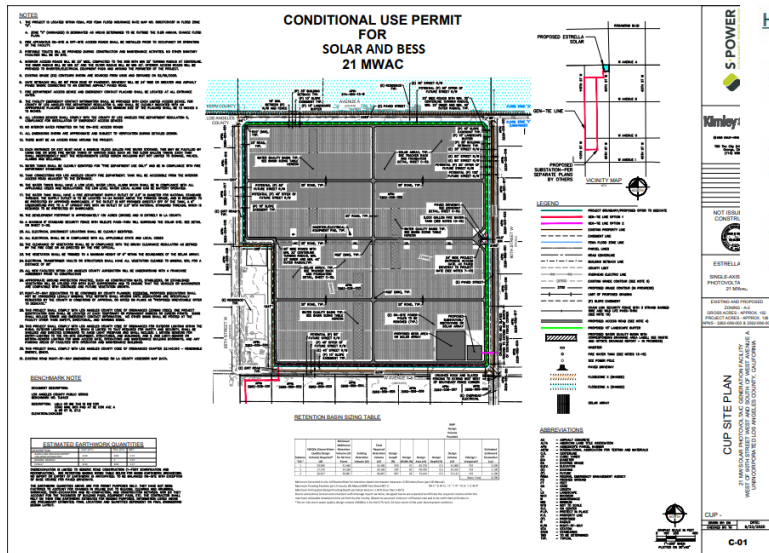
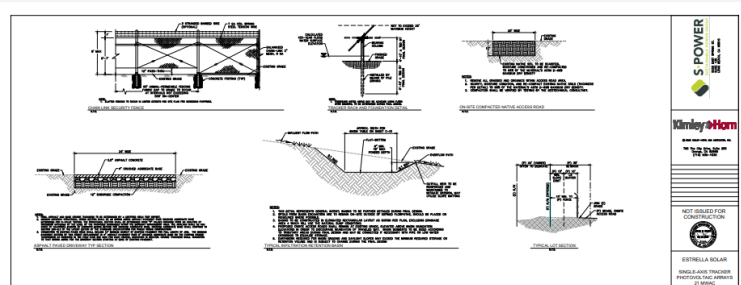
Senate Bill No. 38 / CPUC General Order 167

- Vests the Public Utilities Commission with regulatory authority to implement and enforce standards for the maintenance and operation of facilities that generate and store electricity.
- Require emergency response and emergency action plans
 - Include procedures to address safety of surrounding residents, neighboring properties, emergency responders, and the environment
 - Establish notification and communication procedures between the BESS facility and local emergency management agencies

PERMITTING PROCESS - Local Process



Land Use Entitlements - Regional Planning



[Home](#) > [Environmental Review](#)

[Biological Reviews](#)

[LA County Planning re](#)

[CALIFOR](#)



[Home](#) > [Hearing Notices and Cases Filed](#)

Choose a Planning Area below to see hearing notices and reports of applications filed for development projects with LA County Planning in the past week. Older hearing notices and applications filed reports are also archived below. Visit [How Do I Check Status of an Application](#) for more information about pending applications. Visit [Join our Mailing List](#) to find your Planning Area and sign up for email updates.

LA COUNTY
PLANNING

SHAPING TOMORROW

LA County Public Works - Building and Safety Division

LA County Public Works Building and Safety Division

Energy Storage Systems - Submittal and Permitting
Processes

EpicLA - Types of Permits

- Most projects are submitted electronically via the EpicLA website.
- Types of submittals for Energy Storage system:
 - Express Solar Roof Mount Residential with Energy Storage System Permit – Not reviewed by Regional Planning
 - Electrical Permit for Energy Storage System for Residential and non-Residential : Complex, not reviewed by Regional Planning
 - Utility Scale Energy Storage System: Complex Permit/Regional Planning Review and permitting
 - *The term “complex” on a BSD permit type is the “requires plan check” version of the permit*

Various Submittal Scenarios

Scope of Work	Permit	Notes
New ESS (not eligible for the express permit)	Electrical Permit (Complex)	<i>At time of plan check approval, the electrical plan checker will generate an electrical permit for the ESS and associated equipment items. At permit issuance, the applicant receives ELEC permit.</i>
New ESS with an existing PV and/or existing ESS system on site	Electrical Permit (Complex)	<i>At time of plan check approval, the electrical plan checker will generate an electrical permit for ESS.</i>

Fire Dept Referral and Inspection Coordination

- LA County Fire Department involvement is required for all projects where an ESS is installed.
 - In some cases, a Fire plan review + field inspection is required.
 - In some cases, only the field inspection is required.
- When the project is not eligible for an express permit and is submitted for plan review, the electrical plan checker provides the applicant with a referral sheet with instructions to consult and coordinate with the LA County Fire Department on their requirements.

Fire Dept Referral and Inspection Coordination

- Regardless of which permit type is used, Building and Safety will issue the permit without knowing the applicant's status with LA County Fire.
 - This is because the applicant possibly does not need to submit for Fire plan review, possibly hasn't submitted for Fire plan review, possibly is in progress with Fire plan review, or possibly has Fire plans already approved...
- Regardless of which permit type is used, the applicant is informed that the LA County Fire Department's field inspection must be completed first before contacting Building and Safety for inspection.
- The Building and Safety inspectors are instructed to end an ESS inspection if the Fire Dept field inspection is not completed when they arrive.
- The Building and Safety inspectors accommodate whatever form of approval their local Fire Dept office's procedures call for (signed job card, email confirmation, signed Fire Dept form, etc.).

LA County Fire Department

LA County Fire Department



BESS Hazards

- Electric Shock Hazard
 - Thermal-Runaway Vent Gases
 - Flammable Gases (Hydrogen, CO, Hydrocarbons)
 - Fire & Deflagration (Overpressure Event)
 - Site Cleanup
-
- Primarily/Entirely the same battery chemistries as in Electric Vehicles
 - Similar ordinary combustibles as in any electrical equipment and/or industrial occupancy

LA County Fire Department



Hazard Mitigations

- Site Security & Physical Protection
- “Explosion Control” Systems for Overpressure Hazards
- Grounding, Bonding, & Process Controls for Electrical Hazards
- Remote Monitoring & Controls
- Fire-Alarm Systems with early detection & notification (on- & off-site)
- Emergency Response Plans

LA County Fire Department



Review Process

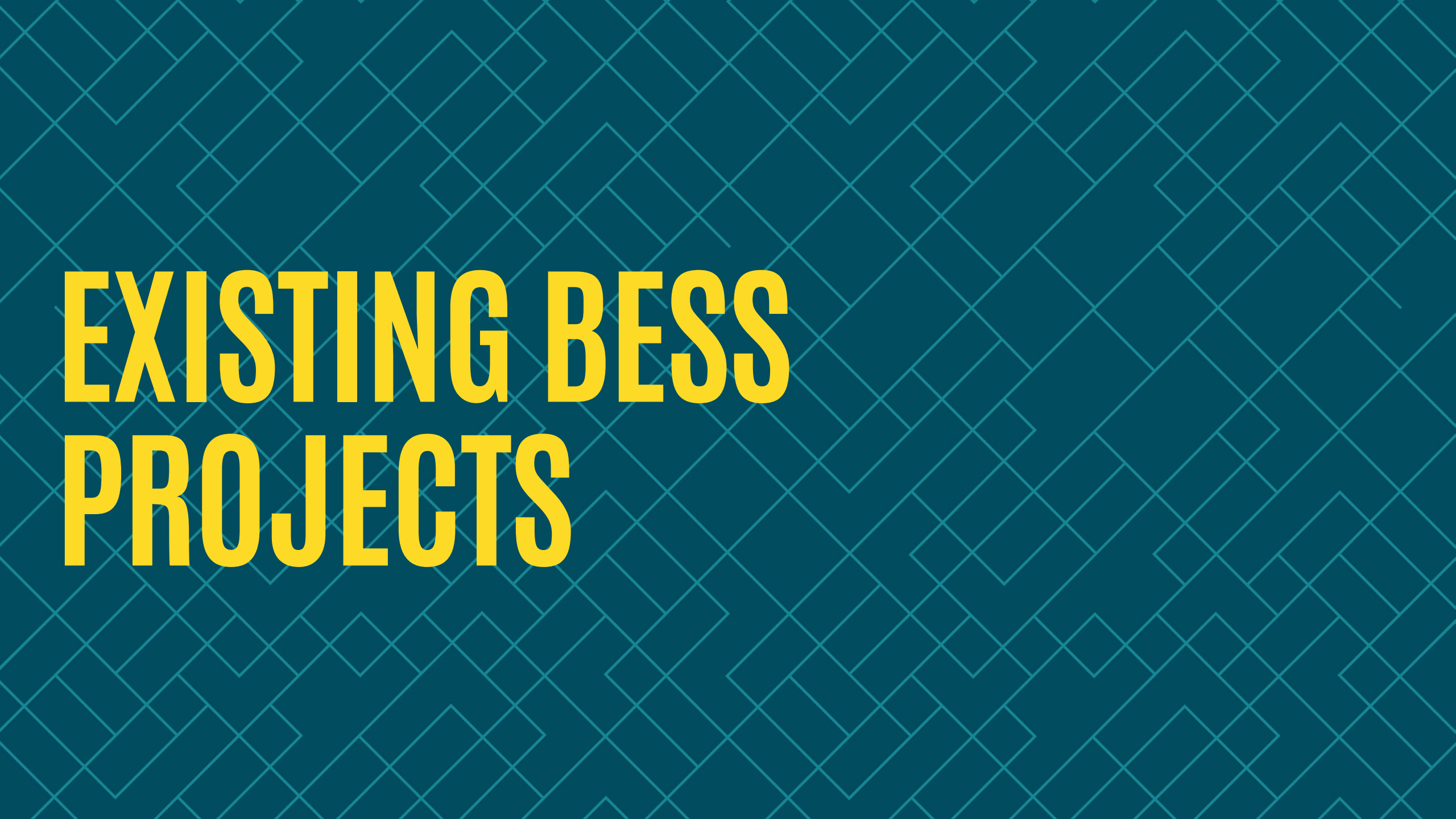
- Specific to the BESS Make & Model under consideration
- Worst-Case Failure Scenarios
 - Require Technical Test Reports, Modeling, & Disclosures
- Remain Very Active in ESS Code & Standards Development

LA County Fire Department



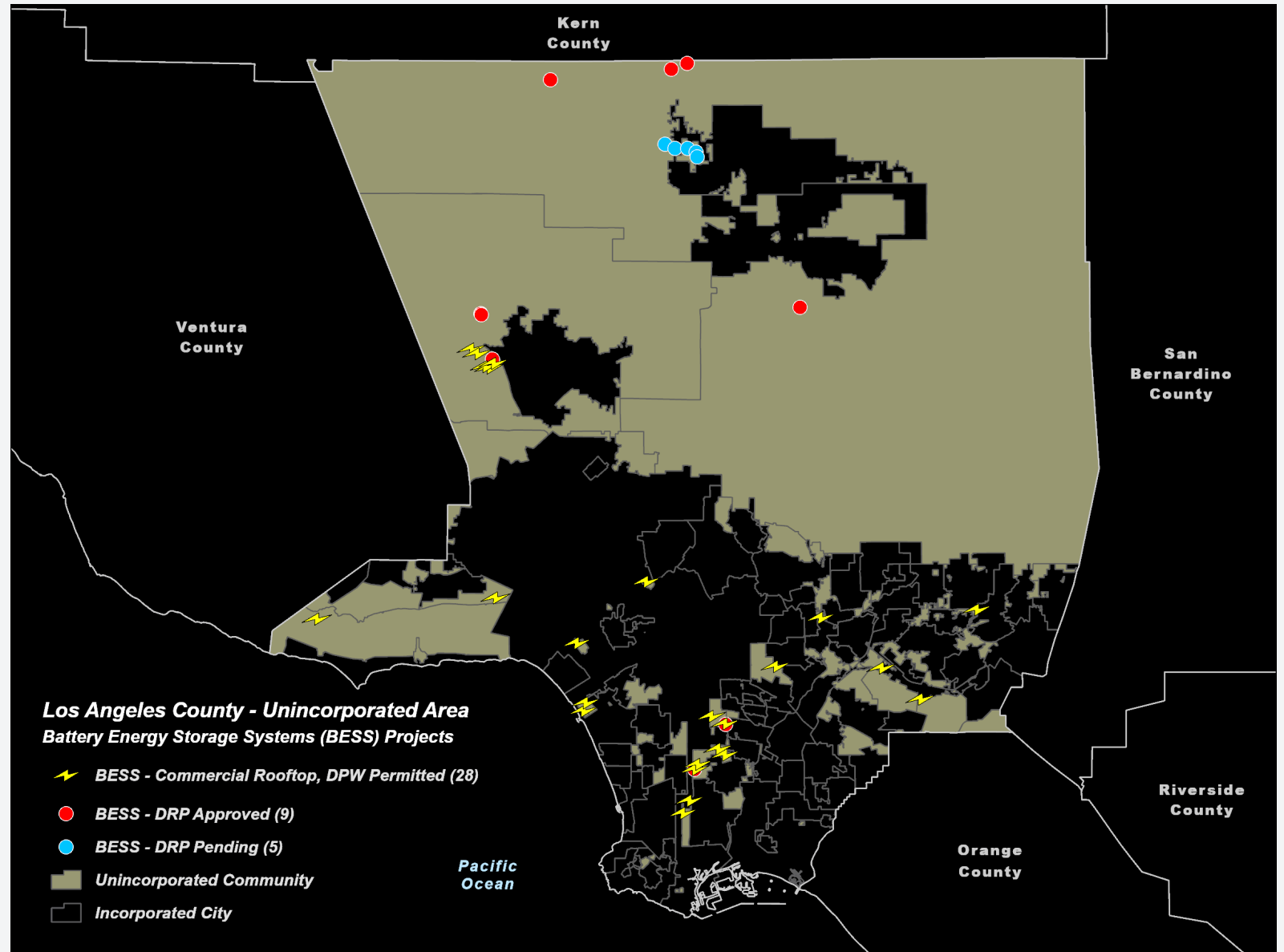
Emergency Response

- Emergency Response Plans (ERP's)
 - General & Site-Specific
 - Response Approach is similar to any Industrial and/or Electrical Site with HazMat Potential
- First-Responder Familiarity, Training & Inspections
 - Initial Comprehensive Training upon Construction
 - Recurring Inspections by Fire Prevention Division
 - Fire Station Site Walks/Visits for Familiarity and Incident Pre-Planning



EXISTING BESS PROJECTS

Projects in Unincorporated LA County



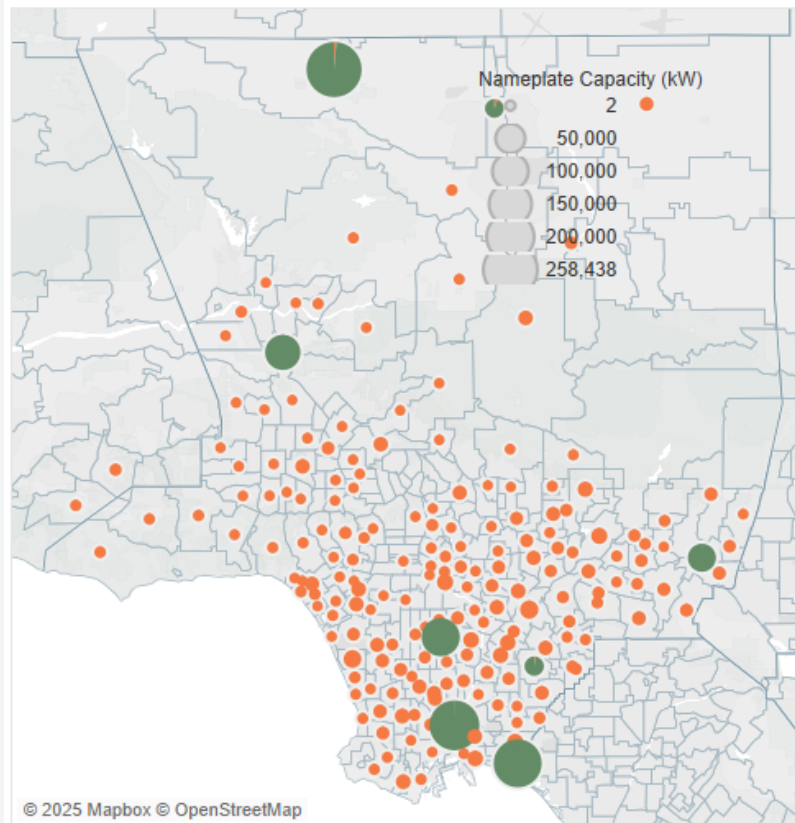
Projects Countywide

California Energy Storage System Survey

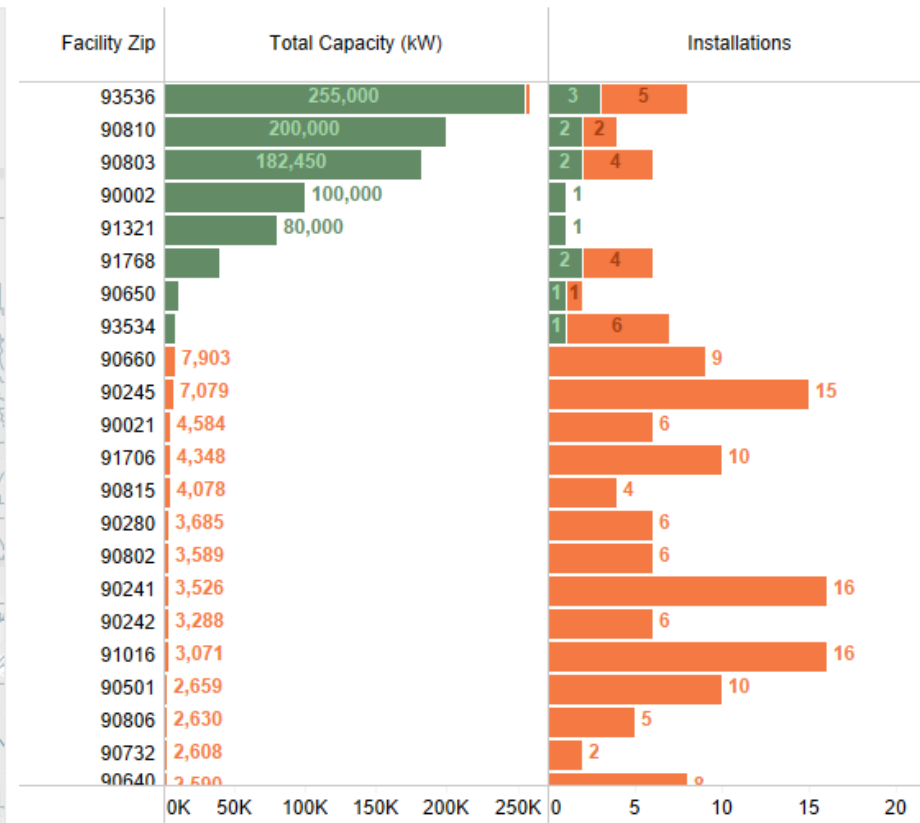
Statewide Energy Storage Power Capacity: **15,763 MW**

Customer Sector	Total Capacity (MW)	Installations	Average Capacity (kW)
Commercial	139	754	184
Utility	876	13	67,362
Total	1,015	767	1,323

Installed Storage Power Capacity by ZIP Code



Power Capacity and Installations



County
Los Angeles

Zip Code
All

Utility
All

Sector
Multiple values

Online Year
All

CAISO Flag
Multiple values

Customer Sector
Commercial
Utility



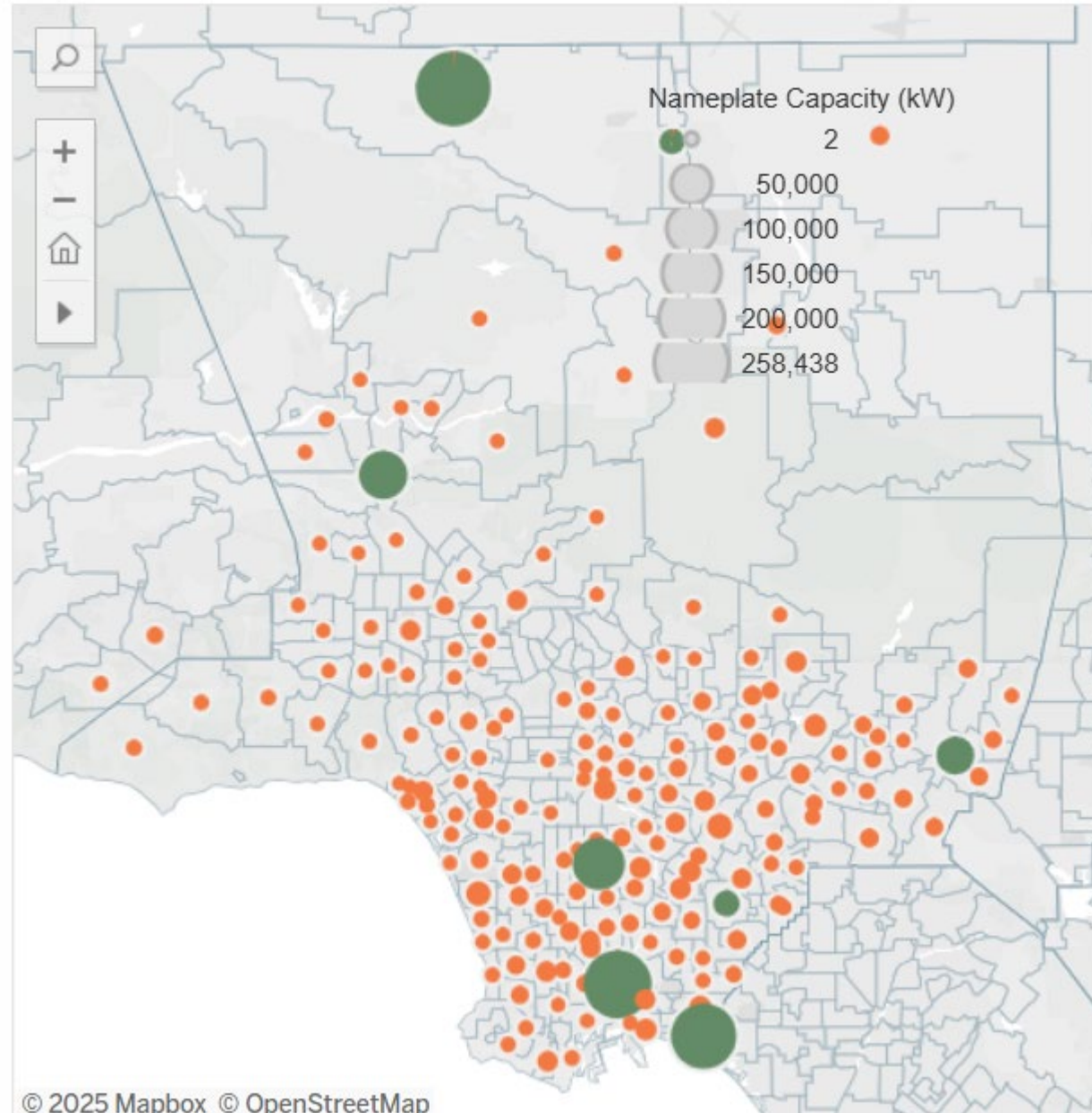
LA COUNTY

PLANNING

SHAPING TOMORROW

Projects Countywide

Installed Storage Power Capacity by ZIP Code



Projects Countywide

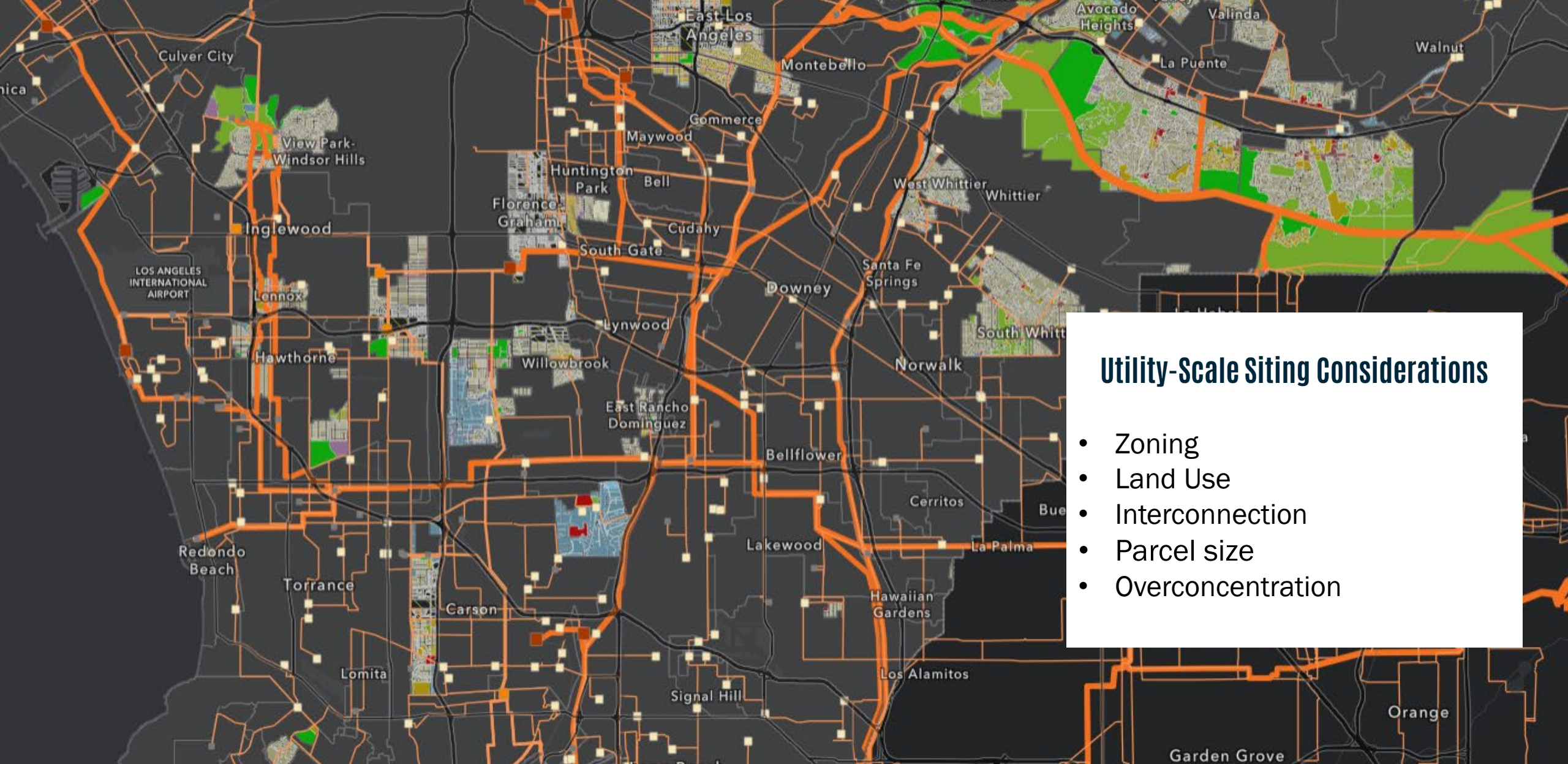
Statewide Energy Storage Power Capacity: **15,763 MW**

Customer Sector	Total Capacity (MW)	Installations	Average Capacity (kW)
Commercial	139	754	184
Utility	876	13	67,362
Total	1,015	767	1,323

CONSIDERATIONS FOR THE ORDINANCE UPDATE

SITING

Location



Utility-Scale Siting Considerations

- Zoning
- Land Use
- Interconnection
- Parcel size
- Overconcentration



Utility-Scale Siting Considerations

- Land uses
- Resource potential
- Interconnection
- Parcel size
- Overconcentration

Where should BESS Projects be sited?

What does BESS overconcentration mean to you?

SAFETY

Safety

Planning Tools

- Exclusion Areas
- Buffers
 - Proximity to sensitive receptors and environmentally sensitive land uses
- Development Standards
 - Perimeter Walls
 - Set-backs
 - Arrangement of arrays
 - Parcel Size

Safety

Planning Tools

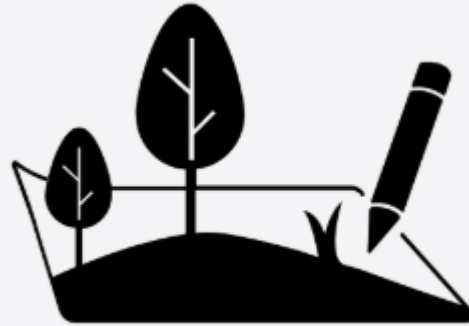
- Exclusion Areas
- Buffers
 - Proximity to sensitive receptors and environmentally sensitive land uses
- Development Standards
 - Perimeter Walls
 - Set-backs
 - Arrangement of arrays
 - Parcel Size

How should we use these tools when regulating battery technologies?

Other Considerations

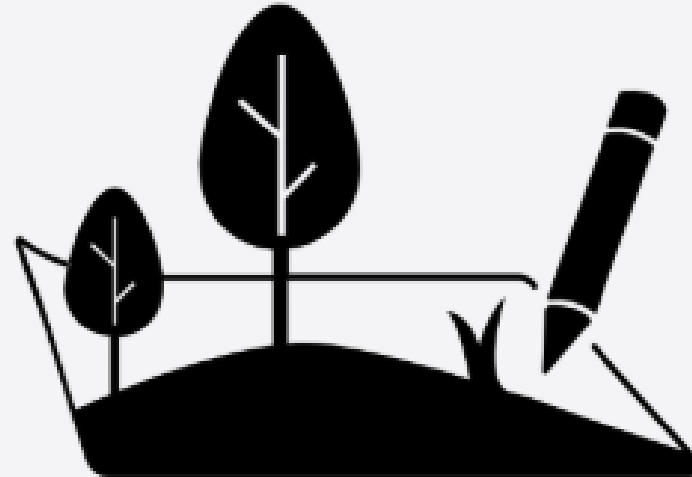
Other Considerations

- Aesthetics
- Noise
- Community Benefits
- Anything we haven't covered?



Other Considerations

- Aesthetics
- Noise
- Community Benefits
- Anything we haven't covered?



Other Considerations

- Aesthetics
- **Noise**
- Community Benefits
- Anything we haven't covered?



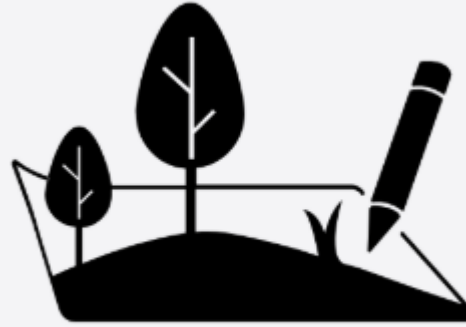
Other Considerations

- Aesthetics
- Noise
- **Community Benefits**
- Anything we haven't covered?



Other Considerations

- Aesthetics
- Noise
- Community Benefits
- Anything we haven't covered?



Final Questions?



Next Steps

Stay Involved

- Survey
- Listening Sessions
- Mailing List
- Preliminary Draft Ordinance
- Future meetings

CONTACT US

Website: <https://bit.ly/reo-update>

Email: RenewableEnergy@planning.lacounty.gov

Phone: 213-974-6476

Mail: LA County Planning
320 W. Temple Street,
Los Angeles, CA 90012

**Fill out our
Survey**



<https://arcg.is/OTCbjT0>